

CLAIMSWhat is claimed is:

1. An ink container comprising
a collapsible ink reservoir for containing a supply
of ink;

5 an outer container for enclosing said collapsible
ink reservoir and configured to receive pressurizing gas
that pressurizes said supply of ink; and

10 an insert structure disposed in said collapsible ink
reservoir for allowing said collapsible ink reservoir to
resist collapse of said collapsible ink reservoir, whereby
resistance to collapse controls an ink supply pressure
versus remaining ink characteristic of said collapsible
ink reservoir.

2. The ink container of Claim 1 wherein said insert
comprises a compliant element.

3. The ink container of Claim 1 wherein said insert
comprises a non-compliant element.

4. The ink container of Claim 1 wherein said insert
comprises foam.

5. The printing apparatus of Claim 1 wherein said foam
comprises polyurethane foam.

6. The ink container of Claim 1 wherein said insert
comprises a foam panel.

7. The ink container of Claim 6 wherein said foam panel includes cut-outs.

8. The ink container of Claim 1 wherein said insert comprises a three-dimensional formed sheet.

9. The ink container of Claim 8 wherein said formed sheet is wave-shaped.

10. The ink container of Claim 8 wherein said formed sheet is C-shaped.

11. The ink container of Claim 8 wherein said formed sheet comprises plastic.

12. The ink container of Claim 8 wherein said formed sheet comprises stainless steel.

13. The ink container of Claim 1 wherein said insert structure determines an amount of remaining ink at which said pressure starts to change.

14. The printing apparatus of Claim 13 wherein said pressure starts to change at an amount of remaining ink that is greater than an amount of remaining ink at which said pressure would change if said collapsible ink reservoir did not include said insert.

15. The ink container of Claim 1 further including a pressure transducer located inside said outer container for sensing a pressure of said supply of ink.

16. An ink container comprising:

a collapsible ink reservoir for containing a supply of ink;

5 an outer container for enclosing said collapsible ink reservoir; and

an insert structure disposed in said collapsible ink reservoir for allowing said collapsible ink reservoir to resist collapse of said collapsible ink reservoir, whereby resistance to collapse controls a pressure versus 10 remaining ink characteristic of said collapsible ink reservoir.

17. The ink container of Claim 16 wherein said insert comprises a compliant element.

18. The ink container of Claim 16 wherein said insert comprises a non-compliant element.

19. The ink container of Claim 16 wherein said insert comprises foam.

20. The printing apparatus of Claim 19 wherein said foam comprises polyurethane foam.

21. The ink container of Claim 16 wherein said insert comprises a three-dimensional formed sheet.

22. The ink container of Claim 16 wherein said insert structure determines an amount of remaining ink at which said pressure starts to change.

23. The printing apparatus of Claim 16 wherein said pressure starts to change at an amount of remaining ink that is greater than an amount of remaining ink at which said pressure would change if said collapsible ink reservoir did not include 5 said insert.

24. The ink container of Claim 16 further including a pressure transducer located inside said outer container for sensing a pressure of said supply of ink.

25. An ink container comprising:

a collapsible ink reservoir containing a supply of ink and having a pressure versus remaining ink characteristic wherein ink supply pressure decreases below 5 a supply pressure threshold when remaining ink decreases below a remaining ink threshold; and

an insert disposed in the collapsible ink reservoir for controlling a range of remaining ink over which the pressure threshold is selected.

26. The ink container of Claim 25 wherein said insert allows the collapsible reservoir to resist an inward collapse of the collapsible reservoir at least when ink remaining in the collapsible reservoir falls below the remaining ink 5 threshold.

27. The ink container of Claim 25 wherein the insert comprises a structure that is deformable by a collapse of the collapsible reservoir.

28. An ink container comprising:

5

means for containing a supply of ink;
means disposed in said means for containing for
controlling an ink supply pressure versus remaining ink
characteristic of said means for containing a supply of
ink.

29. The ink container of Claim 28 wherein said means for
containing a supply of ink comprises a collapsible ink
reservoir.

5

30. The ink container of Claim 28 wherein said means for
containing a supply of ink comprises an outer housing and a
collapsible ink reservoir disposed within said outer housing,
and wherein said means for controlling is disposed within said
collapsible ink reservoir.

31. The ink container of Claim 28 wherein said means for
containing a supply of ink comprises means for containing a
supply of pressurized ink.

5

32. An ink container comprising:
a collapsible ink reservoir for containing a supply
of ink; and
means disposed in said collapsible ink reservoir for
controlling an ink supply pressure versus remaining ink
characteristic of said collapsible ink reservoir.

33. The ink container of Claim 32 further including an
outer container enclosing said collapsible ink reservoir.

34. The ink container of Claim 33 wherein said outer container is configured to contain pressurizing gas that pressurizes said supply of ink.

35. A printing apparatus comprising:

5 a collapsible ink reservoir for containing a supply of ink;

a pressure transducer for providing an ink supply pressure signal indicative of an amount of ink remaining in said collapsible ink reservoir; and

10 an insert structure disposed in said collapsible ink reservoir for controlling an ink supply pressure signal versus remaining ink characteristic of said collapsible ink reservoir.

36. The printing apparatus of Claim 35 wherein said insert allows said collapsible ink reservoir to resist collapse.

37. The printing apparatus of Claim 35 wherein said insert comprises a compliant element.

38. The printing apparatus of Claim 35 wherein said insert comprises a non-compliant element.

39. The printing apparatus of Claim 35 further comprising:

5 an outer container defining an interior chamber and enclosing said collapsible ink bag, said collapsible ink bag defining an unoccupied portion of said interior chamber that is external of said collapsible ink bag.

40. The printing apparatus of Claim 35 wherein said pressure transducer is located inside said outer container.

41. The printing apparatus of Claim 40 wherein said outer container is configured to receive pressurizing gas that pressurizes said supply of ink.